**What is claimed is:**

1. A radial magnetic bearing comprising:

a rotor disk having a first plurality of concentric teeth extending from a surface thereof;

a stator disk having a second plurality of concentric teeth extending from a surface thereof, the second plurality of concentric teeth being spaced apart from the first plurality of concentric teeth by a gap that permits a primary magnetic flux to flow between the first and the second plurality of concentric teeth substantially in a first direction;

a primary magnet magnetically coupled to at least one of the rotor disk and the stator disk and being adapted to provide the primary magnetic flux; and

a plurality of flux focusing magnets fixedly coupled to at least one of the surface of the rotor disk and the surface of the stator disk and producing a secondary magnetic flux that flows substantially in a second direction substantially opposite the first direction.

2. The radial magnetic bearing of claim 1, further comprising a second of the stator disks having a third plurality of concentric teeth extending from a surface thereof and a second plurality of flux focusing magnets, wherein the rotor disk has a fourth plurality of concentric teeth extending from a second surface thereof, the fourth plurality of concentric teeth being spaced apart from the third plurality of concentric teeth by a second gap that permits the primary magnetic flux to flow between the third and the fourth plurality of concentric teeth substantially in the first direction, and the second plurality of flux focusing magnets each being fixedly coupled to one of the second surface of the rotor disk and the surface of the second stator disk and producing the secondary magnetic flux that flows substantially in the second direction.

3. The radial magnetic bearing of claim 1, wherein each of plurality of flux focusing magnets has a substantially square cross section.

4. The radial magnetic bearing of claim 1, wherein each of plurality of flux focusing magnets is substantially ring shaped.

5. The radial magnetic bearing of claim 1, wherein the plurality of flux focusing magnets are positioned in valleys defined by adjacent ones of the first and second pluralities of concentric teeth.

6. The radial magnetic bearing of claim 1, wherein the rotor disk is adapted to rotate about an axis of rotation and the and rotor disk and the stator disk are spaced apart along the axis of rotation.

7. The radial magnetic bearing of claim 1, wherein the rotor disk has only four of the concentric teeth extending from the surface thereof and the stator disk has only four of the concentric teeth extending from the surface thereof.

8. The radial magnetic bearing of claim 1, wherein the flux focusing magnets are formed from one of neodimium iron boron and a sumarium cobalt.

9 The radial magnetic bearing of claim 1, wherein the plurality of flux focusing magnets are fixedly coupled to the at least one of the surface of the rotor disk and the surface of the stator disk by bonding.

10. A radial magnetic bearing comprising:

a rotor disk adapted to rotate about a predetermined axis and having a first and a second circumferentially-extending raised portion projecting from a surface thereof;

a stator disk axially spaced from the rotor disk and positioned around the predetermined axis, the stator disk having a third and a fourth circumferentially-extending raised portion projecting from a surface thereof;

a permanent magnet magnetically coupled to at least one of the rotor disk and the stator disk and providing a primary magnetic flux;

a first ring-shaped magnet positioned between the first and the second raised portions; and

a second ring-shaped magnet positioned between the third and the fourth raised portions.

11. The radial magnetic bearing of claim 10, further comprising a second of the stator disks having a fifth and a sixth circumferentially-extending raised portion projecting from a surface thereof, a third ring-shaped magnet, and a fourth rings-shaped magnet, wherein the rotor disk has a seventh and an eighth circumferentially-extending raised portion projecting from a second surface thereof, the third ring-shaped magnet is positioned between the fifth and the sixth raised portions, and the fourth ring-shaped magnet is positioned between the seventh and the eighth raised portions.

12. The radial magnetic bearing of claim 10, wherein the first and the second ring-shaped magnets each have a substantially square cross section.

13. The radial magnetic bearing of claim 10, wherein the plurality of ring-shaped magnets are positioned in valleys defined by adjacent ones of the first and second pluralities of concentric teeth.

14. The radial magnetic bearing of claim 10, wherein the flux focusing magnets are formed from one of neodimium iron boron and a sumarium cobalt.

15. The radial magnetic bearing of claim 10, wherein the first and the second ring-shaped magnets are fixedly coupled to the respective surfaces of the rotor disk and the stator disk by bonding.

16. A radial magnetic bearing comprising:

a rotor disk having a first plurality of circumferentially-extending raised portions projecting from a major surface thereof;

a stator disk having a major surface that faces the major surface of the rotor disk, the major surface of the stator disk having a second plurality of circumferentially-extending raised portions projecting therefrom; and

a plurality of flux focusing magnets fixedly coupled to at least one of the major surfaces of the rotor disk and the stator disk.

17. A radial magnetic bearing comprising:

a rotor disk adapted to rotate about an axis of rotation and having a first plurality of circumferentially-extending raised portions formed thereon, for conducting a primary magnetic flux substantially in a first direction;

a stator disk positioned around the axis of rotation and axially spaced from the rotor disk, the stator disk having a second plurality of circumferentially-extending raised portions formed thereon for conducting the primary magnetic flux substantially in the first direction;

a primary magnet magnetically coupled to at least one of the rotor disk and the stator disk and being adapted to provide the primary magnetic flux;

a first plurality of flux focusing magnets each being positioned between adjacent ones of the first plurality of raised portions and each being polarized in a direction substantially opposite the first direction; and

a second plurality of flux focusing magnets each being positioned between adjacent ones of the second plurality of raised portions and each being polarized in the direction substantially opposite the first direction.

18. The radial magnetic bearing of claim 17, wherein each of the flux focusing magnets has a substantially square cross section.

19. The radial magnetic bearing of claim 17, wherein each of the flux focusing magnets is substantially ring shaped.

20. The radial magnetic bearing of claim 17, wherein the plurality of flux focusing magnets are positioned in valleys defined by adjacent ones of the first and second pluralities of raised portions.